

UNS Wrought and Cast Alloy – Registration Request Form

Email filled-out form to Jim Michel: registrar@unscopperalloys.org

Requested Alloy # C **Date:** **Requestor:**

(add a suggested identification for preliminary consideration)

Company:

Contact Representative:

Street Address:

City: State: Zip code: Country:

E-mail: Phone: Fax:

CHEMICAL COMPOSITION

(in percent, maximum, unless shown as a range or a minimum.) (include all significant Elements and appropriate composition range)

Cu **Pb** **Sn** **Zn** **Fe** **P** **Ni** **Mn** **Si**

Other Elements

(Note: Maximum number of included elements not to exceed 14.)

Cu + sum of named elements **% min.**

MECHANICAL PROPERTIES

(Cut and paste this section to present multiple product forms and/or tempers.)

Alloy Form Strip Sheet Rod Bar Wire Forging

Temper Code **Temper Description**

(as stated in ASTM B601, such as O10 Cast and Annealed)

US Customary units

SI Units

Tensile Strength: Typical ksi MPa

Min ksi MPa

Max ksi MPa

Yield Strength

[type]: Typical ksi MPa

Min ksi MPa

Max ksi MPa

Elongation ksi MPa

Hardness [type] ksi MPa

Shear Strength ksi MPa

Compression Strength ksi MPa

Impact Strength ksi MPa

Fatigue Strength ksi MPa

PHYSICAL PROPERTIES

| | US Customary units | SI Units |
|----------------------------------|--------------------------------------|--|
| Melting Point (Liquidus) | °F | °C |
| (Solidus) | °F | °C |
| Density | lb/cu in. at 68°F | gm/cu cm at 20°C |
| Specific Gravity | | |
| Electrical Resistivity | ohm.cmil/ft at 68°F | microhm-cm at 20°C |
| Electrical Conductivity | % IACS at 68°F | Siemens/cm at 20°C |
| Coefficient of Thermal Expansion | 10 ⁻⁶ per °F (68 - 572°F) | 10 ⁻⁶ per °C (20°C - 300°C) |
| Magnetic Permeability | | |
| Thermal Conductivity | Btu /sq ft/ft/hr/°F at 68°F | W/m °K at 20°C |
| Modulus of Elasticity in Tension | ksi | MPa |
| Modulus of Rigidity | ksi | MPa |
| Poisson's Ratio | | |

FABRICATION PRACTICES

Joining Technique

Suitability

| Joining Technique | Excellent | Good | Fair | Poor | Not recommended |
|--------------------------------|-----------|------|------|------|-----------------|
| Soldering | Excellent | Good | Fair | Poor | Not recommended |
| Brazing | Excellent | Good | Fair | Poor | Not recommended |
| Oxyacetylene Welding | Excellent | Good | Fair | Poor | Not recommended |
| Gas Shielded Arc Welding | Excellent | Good | Fair | Poor | Not recommended |
| Coated Metal Arc Welding | Excellent | Good | Fair | Poor | Not recommended |
| Resistance Welding—Spot | Excellent | Good | Fair | Poor | Not recommended |
| —Seam | Excellent | Good | Fair | Poor | Not recommended |
| —Butt | Excellent | Good | Fair | Poor | Not recommended |
| Capacity for Being Cold Worked | Excellent | Good | Fair | Poor | Not recommended |
| Capacity for Being Hot Formed | Excellent | Good | Fair | Poor | Not recommended |

Hot Forgability Rating % (Forging Brass = 100)

Machinability Rating % (C36000 Free Cutting Brass = 100)

Typical Forms

Typical Uses

Typical Reasons for Uses

Intended Applicable Standards (if applicable)

CASTING CHARACTERISTICS

Patternmakers Shrinkage (in. fractional dimension), Shrinkage during Aging (in. fractional dimension)

Shrinkage during Freezing (in. fractional dimension), Effect of Section Size (Large Medium Small)

Shrinkage (Large Medium Small), Casting Yield (Large Medium Small)

Drossing (Large Medium Small), Fluidity (Large Medium Small)

Gassing (Large Medium Small)